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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,129	05/29/2001	Joseph J. Ervin	P6452	6472

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EXAMINER

HUYNH, KIM T

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 12/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,129

Applicant(s)

ERVIN, JOSEPH J.

Examiner

Kim T. Huynh

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-24 and 28-36 is/are rejected.
- 7) ☒ Claim(s) 8-10, 25-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 11-13, 17-24, 28-30, 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Cepulis (US Patent 6,397,268)

As per claims 1, 18, 35-36, Cepulis discloses a method for configuring a bus system having a plurality of bus segments with bus master devices and slave devices connected thereto, the bus segments connected by bus bridges, each bus bridge having a bridge ID, a plurality of internal registers and an address bitmap for controlling information flow through the bridge, the method comprising:

- Walking the bus system to discover the bus topology and the bus bridges that form that topology; (col.11, lines 22-37)
- Assigning a bridge ID to each discovered bridge; and (col.11, lines 22-47)
- Entering information into internal registers and address bitmap of each discovered bridge to control the flow of information between bus segments. (col.11, lines 48-67)

As per claims 2, 19, Cepulis disclose wherein the bus topology is a tree configuration and step comprises performing a recursive procedure that configures each branch of the tree. (col.11, lines 22-37)

As per claims 3, 20, Cepulis discloses wherein the bus system has an address space and wherein step comprises probing the address space for slave devices. (col.12, lines 1-8), (col.5, line 65-col.6, line 7)

As per claims 4, 21, Cepulis discloses wherein step comprises checking for a duplicate slave address when a slave device is located. (col.6, lines 26-37)

As per claims 5, 22, Cepulis discloses wherein step comprises:

- inserting a slave address of a located slave device into a global address bitmap if the slave address is not a duplicate; and (col.6, lines 26-37)
- Inserting the slave address into a tunnel list if the slave address is a duplicate. (col.6, lines 38-51)

As per claims 6, 23, Cepulis discloses wherein step further comprises repeatedly probing the address space for upstream bridges when no slave device is located. (col.6, lines 26-37)

As per claims 7, 24, Cepulis discloses wherein step comprises assigning a bridge ID to each located upstream bridge. (col.11, lines 22-37)

As per claims 11, 28, Cepullis discloses method further comprising:

- Walking the bus system to discover upstream bridges; and (col.11, lines 22-37), (col.4, lines 45-61)

- Entering information into internal registers and address bitmap of each discovered upstream bridge to control the flow of information between bus segments. (col.11, lines 48-67)

As per claims 12, 29, Cepullis discloses wherein step comprises setting the bridge ID of all bridges to a predetermined bridge ID upon reset and successively configuring each bridge by sending commands and data to the predetermined bridge ID. (col.8, lines 45-67)

As per claims 13, 30, Cepullis discloses wherein step comprises connecting all bridges on the same hierarchical level so that only one bridge at a time responds to the predetermined bridge ID. (col.4, lines 5-7), (col.4, lines 17-34)

As per claims 17, 34, Cepullis discloses the method further comprising providing additional information to each bridge to enable the bridge to operate with a deterministic arbitration protocol.(col.4, lines 11-61)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-15, 31-32, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cepulis (US Patent 6,397,268) in view of Story et al. (US Patent 6,260,092)

Cepullis discloses all the limitations as above except wherein all bridges on the same hierarchical level are connected in a daisy chain configuration wherein enables the next bridge to respond to the predetermined bridge.

However, Story discloses bridges are connected in a daisy chain. The output of each interface inputs the input of the next interface in the chain and so forth.

(col.7, lines 45-55)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Story's teaching into Cepullis's method so as to provide devices and methods for reducing interconnect signal line count by using a serially connected bus and to improve the operation of so that the bandwidth can be improved to make this serial connection function as a practical alternative to existing parallel busses. (col.1, lines 49-57)

5. Claims 16, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cepulis (US Patent 6,397,268) in view of Mayo et al. (US Patent 6,205,147)

Cepullis discloses all the limitations as above except wherein two unidirectional bridges are connected in parallel. However, Mayo's system allow multiple bridges connected in parallel. (col.3, lines 29-38)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Mayo's teaching into Cepullis's method so as to provide the ability to perform security functions. (col.1, lines 47-57)

CLAIMS OBJECTION

6. Claims 8-10 , 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art does not teach or suggest the method wherein step further comprises repeatedly probing for downstream bridges when no further upstream bridges are located in step repeatedly probing the address space for upstream bridges when no slave device is located.

Conclusion

7. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.*

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.

Kim Huynh

Dec. 5, 2003



Khanh Dang
Primary Examiner